

Community Advisory Panel Meeting Summary
Strosacker Center, Conference Room 110
220 W. Main Street, Midland
October 8, 2003
4:30 p.m.

Attendees: Ruth Averill, Mary Jo Bean, Len Ballosh, Drummond Black, Vince Castellanos, Robert Cowling, Betty Damore, Kevin Datte, Tracey Easthope, Garret Geer, Rick Hayes, Diane Hebert, Gary Henry, Kathy Henry, Sandy Hermann, Michelle Hurd Riddick, Terri Johnson, Michael Kelly, Brian Kischnick, Mike Krecek, John Kyte, Donna Mallonee, Sandy Mannion, Dan Manyen, Kathie Marchlewski, Bill McQuillan, Sarah Opperman, Betty Owen, Rob St. Mary, Jeremiah Stettler, Andy Such, William Webber, and Kent Woodburn.

Department of Environmental Quality (DEQ) staff and contract staff in attendance: Joy Brooks, Allan Brouillet, Brenda Brouillet, George Bruchmann, Steve Buda, Hector Galbraith, Andrew Hogarth, Cheryl Howe, Ginny Himich, Sue Kaelber-Matlock, Deb MacKenzie-Taylor, Trisha Peters, Liane Shekter Smith, Al Taylor, and Terry Walkington.

Department of Community Health (DCH) staff in attendance: Brendan Boyle, Linda Dykema and Kory Groetsch.

Department of Agriculture staff in attendance: Brian Hughes.

U.S. Environmental Protection Agency (U.S. EPA) staff in attendance: Greg Rudloff.

Opening Remarks

George Bruchmann, the DEQ Waste and Hazardous Materials Division (WHMD) Chief, welcomed everyone to the third meeting of the Community Advisory Panel (CAP) and briefly introduced the agency staff present at the meeting. Mr. Bruchmann then asked Allan Brouillet, Remediation and Redevelopment Division (RRD), Saginaw Bay District Office, to introduce the first speaker.

Tittabawassee River Ecological Risk Assessment Presentation and Questions/Answers

Mr. Brouillet introduced Dr. Hector Galbraith, Galbraith Environmental Sciences, LLC, a contractor to the DEQ, RRD, who conducted an aquatic ecological risk assessment of the Tittabawassee River. Dr. Galbraith presented an abbreviated overview of the results of the aquatic ecological risk assessment that was presented to staff of the DEQ and The Dow Chemical Company (Dow) on October 7, 2003. Handouts on this presentation were provided at the meeting. The full Powerpoint presentation is available upon request or may be viewed on the DEQ website under AQUATIC ECOLOGICAL RISK ASSESSMENT at: http://www.michigan.gov/deq/0,1607,7-135-3308_21234-43808--,00.html. The final report was also made available at the above website address in mid-November, 2003. Hard copies are available upon request.

The primary questions and answers following the presentation are summarized below.

Q: Is this a complete enough ecological risk assessment for remediation purposes?

A: Yes, although additional data could be collected.

Q: Has the DEQ looked over Dow's ecological risk assessment?

A: Dow originally presented the Michigan State University (MSU) work plan to the DEQ as an integral element of its ecological risk assessment. The DEQ reviewed the MSU work plan and made a determination that the work plan could not be approved. At subsequent meetings, Dow changed its position and indicated that the MSU grant and work plan is to be used by MSU as appropriate for conducting basic ecological risk assessment research and not specifically to satisfy the ecological risk assessment requirements of the hazardous waste facility operating license. Therefore, the DEQ is not reviewing MSU's academic studies under this grant from Dow. Dow has not yet submitted a work plan for the ecological risk assessment required pursuant to the Scopes of Work for Remedial Investigation under the operating license. The reporting in local newspapers on this issue has been confusing. In the future, data from MSU's studies may be used by Dow as part of their ecological risk assessment required under the operating license. If Dow chooses to use such data, they would be used and reviewed in the same manner as any other ecological risk assessment data developed through university or other research.

The DEQ does not expect Dow to repeat the aquatic ecological risk assessment conducted by the DEQ's contractor, Dr. Galbraith, but this work could be built upon.

Q: Where in the sensitivity range do squirrels fall?

A: This was not looked at since this was an aquatic, not a terrestrial, ecological risk assessment.

Q: Were mink studies done as part of the aquatic ecological risk assessment?

A: No, the data and toxicity reference values that were used in the aquatic ecological risk assessment were from lab studies. It has been reported anecdotally that people don't see mink or otters on the Tittabawassee River.

Q: Does Dr. Galbraith know whether there are mink or otters on the Tittabawassee River?

A: No, but he said that he suspects they are having reproductive impacts.

Q: How duplicative is Dow's ecological risk assessment?

A: The WHMD reiterated that Dow has not yet proposed the ecological risk assessment required under the Scope of Work. The MSU ecological research under the grant from Dow is not Dow's ecological risk assessment that is required under the Scope of Work. Garret Geer responded that MSU's work will set the baseline for Dow's ecological risk assessment that will be done. It is a preliminary screen to help determine where to take the larger study. Dow will take the DEQ ecological risk assessment into consideration. A CAP member stated that there needs to be an approval process. The WHMD responded that there will be and that Dow should focus on the terrestrial ecological risk assessment. Mr. Geer responded that Dow is after more information to make educated decisions.

Q: Could animals contaminated by contact with the contaminated Tittabawassee area export risk elsewhere?

A: Migratory birds could have their reproduction affected wherever they end up. Some birds might not be affected much if they're in the area for a very short time. The DEQ focused on collecting samples during the time of year when bird species were considered residents of the contaminated area.

Q: Could we expect to see higher or lower results with a different sample size?

A: We would potentially see the range expand with a larger "n" (number of samples).

Q: When will the final report on the Tittabawassee River aquatic ecological risk assessment be available?

A: It will be put up on the DEQ website in about a month (it was made available on about November 13, 2003). The Powerpoint slides for Dr. Galbraith's full presentation were made available on the DEQ website within a day or two after the October 8, 2003 CAP meeting.

Q: What are the characteristics of the fish that were sampled?

A: Carp are bottom feeders which tend to stay close to the sediments and are considered a resident type of fish. Gizzard shad are not bottom feeders, but are a fatty fish. Catfish also tend to feed on the river bottom. Bass are predatory fish. Each fish species represents a differing lifestyle occurring in the river with different food sources and living habits. The trait that all these fish species share is that they were present in the river during the summer and are considered to be resident fish. Walleye are generally not resident fish.

Q: What constitutes risk?

A: Risk is caused by enough contamination in an animal's diet that might result in reproductive impairment. In follow-up to the CAP meeting Mr. Brouillet asked Dr. Galbraith to put together some additional information to clarify the concept of "risk" as compared to "impact" (see the attached memorandum).

Note: Other discussion during the Q & A session that was not adequately captured by the notetaker related to determining a safe dietary threshold and the use of population studies as part of the ecological risk assessment.

Approval of September 3, 2003 CAP Meeting Summary

Cheryl Howe asked whether there were any comments on or revisions to the draft summary for the September 3, 2003 CAP meeting. None were raised.

Update and Discussion of Agricultural Issues

Dr. Brian Hughes, Michigan Department of Agriculture (MDA), provided an update on agricultural issues related to the Tittabawassee River flood plain. Dr. Hughes indicated that the main issues/niche he is involved with include food safety, animal health, worker risk, and migration of soils. He can assist in determining how much area and what crops are involved. In looking at the 100-year flood plain, it is estimated that about 3,000 acres are under agricultural production. About 90 percent of this is corn/soybeans and the other 10 percent is wheat/alfalfa/nursery stock. The MDA used a GIS approach and looked at maps they have on the computer for the tri-county area. About 590 parcels are zoned agricultural. A telephone survey was done in 2002, followed up by a mailed survey. It confirmed that the majority of production is corn/soybeans.

Dr. Hughes provided some information on the Conservation Reserve Enhancement Program (CREP). Under this program, farmers can put land into conservation easements to decrease erosion and increase wildlife opportunities. The MDA has looked at who owns the affected properties along the Tittabawassee River and what they grew in 2002 and will use this information to contact farmers to promote putting land into CREP. Dr. Hughes confirmed that

very few commercial animal facilities are located in the flood plain. A survey may be done to determine whether animals are being moved into the flood plain. With respect to worker risk, the use of no till practices is being promoted. The MDA is concerned about, and is pushing the CREP program, in cases where the potential exists for migration of contaminated soil. In addition, the MDA is working with the MSU Extension Service and getting some commodities for analysis later this year. Previous testing has shown non-detectable levels of dioxins (less than 5 parts per trillion). The MDA is trying to get lower detection limits for future testing.

Q: What about the dust that is raised, particularly during harvesting?

A: At this point, nothing can be done because of the difficulty in determining the dust contamination level and whether an inhalation hazard exists (e.g., for the agricultural workers).

Q: Is it safe for nearby residents?

A: It would be more of a problem to agricultural workers.

Q: Could sampling of tractor filters be considered?

A: Possibly.

Q: The dioxin reassessment indicates that vegetables in the squash family are more likely to have dioxin uptake. Is this type of farming in the area?

A: Such farmers have not been found near the river.

Q: A local farmer in the flood plain area sells produce (sweet corn). There are sections of field that don't grow vegetation. It was also reported that this farmer's produce goes to West Michigan.

A: The areas that don't have vegetation likely have high chloride levels. Dr. Hughes indicated that he is looking to collect commodities at this farm. Some commodity sampling was previously done at this location, but the MDA is resampling with a lower detection limit. Also, sampling is being conducted adjacent to National Plate Glass (a site with Arsenic contamination).

Q: Are farmers being informed?

A: Yes, the MDA is advocating no till farming.

Q: Under CREP, does the state buy out the property?

A: CREP provides for an easement for 15 years or farmers can buy into it permanently. A CAP member clarified that 150 feet either side of drains can be put into CREP to reduce soil erosion under the Clean Water Act Stormwater program to prevent contamination from running off, even if a field is tilled. Another CAP member stated that tiles can be broken to return a field to wetlands.

Q: A CAP member expressed concern about a cloud of dust in James Township that could be seen a mile away and the possible impact of this on their house. Another CAP member said they were feeling the same frustration and that MDA should find out where the field is located and get commodity for testing or test the soil levels.

A: The field is located at Dutch and Stroebel. In cases where soybeans are being harvested, the cloud may mostly be plant material rather than dust.

Q: What is being done at Dow to reduce dioxin sources?

A: DEQ staff provided a brief explanation of the on-site corrective action activities and monitoring programs at Dow under the hazardous waste facility operating license. The Compliance Schedule for on-site corrective action is available on the DEQ website at <http://www.deq.state.mi.us/documents/deq-whm-hwrc-complianceschedule.pdf>.

In addition, Dow's two existing hazardous waste incinerators have been replaced with a new, single incinerator which is in the process of going through start-up and compliance testing. This new incinerator is more efficient, has more stringent emission standards and will emit lower levels of air pollutants.

Q: How does the MDA approach farmers and is assistance needed to make sure they're aware? Mailed items may not be received. Are personal contacts made?

A: The Right to Farm and MSU Extension Service staff go out to farms. Dr. Hughes provided his phone number, 517-241-3267, and indicated he is willing to partner on this to increase farmers' awareness.

Q: Is the word out on no till and CREP?

A: Yes, the MDA is telling area farmers to use no till practices and to put frequently flooded property into CREP. For crops other than corn/soybeans, tilling should be done when moisture levels are up and wind levels are low.

Q: What about doing a town hall meeting for farmers?

A: That is a good idea, but it might be difficult to get good attendance given the large number of parcels.

Q: Can anything else be done to eliminate exposure?

A: Fall is not the best time to discuss harvesting practices with farmers when they are so busy. The best time to address this is in the winter. Dr. Hughes stated that the MDA would try to meet with the farmers either this fall or winter.

Following this question, Al Taylor indicated that for purposes of reviewing Dow's Scope of Work and Remedial Investigation Work Plan, the MDA should identify to the DEQ what their data needs would be with respect to off-site dust migration, etc. Andy Hogarth stated that while harvesting is continuing the DEQ could consider doing some sampling to see if dust is a problem (e.g., using soil boxes or air monitors just outside an agricultural area). A CAP member stated that tractors have outlets for dust and suggested the possibility of sampling dust from a tractor's waste bin. [Note: DEQ staff have not had yet an opportunity to pursue any of these suggestions about dust sampling due to focusing their work effort on the Scope of Work reviews.]

EPA Superfund Innovative Technology Evaluation (SITE) Project to Identify an Accurate, Less Expensive and More Rapid Dioxin Analytical Tool for Midland and Tittabawassee Corrective Action Work

Mr. Taylor and Sue Kaelber-Matlock provided an overview of the EPA SITE project that the DEQ is participating in. Dioxin analysis is expensive. Because of this, it limits the amount of characterization that can be done. The purpose of the SITE program is to identify more efficient and economical dioxin/furan analytical techniques. The project will involve collecting 18

samples in one gallon containers from the Midland/Tittabawassee area and shipping them to Battelle Labs, where they will be composited, analyzed and re-packaged into 4 oz. jars for the field demonstration. Samples are being collected from other sites with dioxin contamination as well. A scientific study will be run to evaluate several vendors' processes. Midland/Tittabawassee area samples are to be collected by November 28, with analysis being done in Spring 2004. Results may be available in late Summer 2004. The final report is scheduled for November 2004.

Q: What is the range of detection limits?

A: 1 part per trillion to 1 part per billion. These methods are generally used for range-finding purposes.

Q: Will soils be kept unique?

A: Yes. Each vendor will analyze 200 samples, 60 percent from sites and 40 percent spiked with known concentrations. Results will be Total TEQ, not congener specific. Congener concentrations will be analyzed by the EPA using Method 1613, but not by the vendors. It will be assumed that the samples will be extremely low in PCBs, with all of the toxicity from dioxins/furans, not PCB dioxin-like toxicity.

Q: So is the bottom line to find which vendors are legitimate, can do sampling cheaper and to determine which contaminated areas need to be looked at in more detail?

A: Yes, and which processes might work well for particular sample types. That is why a range of technologies are being evaluated. The DEQ views this as a win/win/win situation and is grateful to the EPA for providing the opportunity to participate in this project.

Next Steps for Scopes of Work

Mr. Taylor and Ms. Howe provided a brief overview of the next steps for the Scopes of Work review. Technical staff have committed to meeting every week or so with Dow staff to discuss what needs to be done to revise the Scopes of Work so they are approvable and to develop implementable Interim Response Activities Work Plans and Gant chart schedules like the compliance schedule for on-site corrective action work that is attached to the operating license.

It is expected that the Notice of Deficiency (NOD) will be drafted by the end of October, followed by a couple weeks of internal review. A question was asked about the role of the EPA in the Scope of Work review. The EPA has reviewed and is reviewing Dow's Scopes of Work and providing their comments to the DEQ. The DEQ will consider and incorporate the EPA's comments into the NOD since they provide oversight of and funding to Michigan's hazardous waste program. However, Michigan is a fully authorized state for issuing operating licenses containing corrective action requirements. Another question was asked about whether the CAP would be able to review and comment on the NOD. No - while the CAP was established to provide input to the DEQ and that input has been valuable, under Dow's operating license and the hazardous waste regulations, the responsibility for the review the Scopes of Work and issuing the NOD rests with the DEQ Waste and Hazardous Materials Division. However, this review will take the comments received from the CAP and the public into serious consideration.

A question was asked about who would be conducting the terrestrial ecological risk assessment and when would it be done. One will be conducted in the future, but at this point, the DEQ is not sure who will be doing it. Garret Geer reiterated that an independent study by a contractor would be conducted, with the work plan submitted for review and approval. Mr. Geer then indicated that Dow had submitted a work plan to the DEQ for the wild game evaluation for deer,

turkey, and rabbit or squirrel. The upstream reference site is proposed to be in the Sanford area and the downstream areas are proposed to be south of Imerman Park and near Smith's Crossing. 10 to 15 animals are to be collected at each location for dioxin/furan analysis for comparison to the upstream concentrations. A CAP member asked a question about whether animal testing would be done for the City of Midland. No, the study is focusing on game animals taken for consumption and people don't hunt within the city. The CAP member commented that it would be interesting to see the levels in deer from Dow's Midland Corporate Center property where deer are frequently seen and asked that Dow do this.

Many thanks to Mike Krecek, Drummond Black and the City of Midland for coordinating/ providing the meeting place and snacks. The next CAP meeting is scheduled for 4:30 - 7:00 p.m. on Wednesday, December 3, 2003, at a location to be determined. Potential topics for the next meeting are: updates on exposure investigation, frequently flooded issue, wild game results, and more detailed information on the SITE project.

The meeting was adjourned at about 7:00 p.m.